

Taylor, Chimin

From: Rafter, Susan
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Subject: here is your patent abstract

File 351:Derwent WPI 1963-2005/UD,UM &UP=200547

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DIALOG(R)File 351:Derwent WPI

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XRAM Acc No: C01-080392

High strength polyethylene fiber for cut fibers, ropes, nets, bullet proof and protective clothing, protective gloves, concrete and helmets, comprises high molecular weight polyethylene

Patent Assignee: TOYO BOSEKI KK (TOYM); TOYOBOKK (TOYM)

Inventor: OKANO T; NOMURA Y; KONISHI C O T B K K; OHTA C O T B K K;

SAKAMOTO C O T B K K; KONISHI T; MIYASAKA T; NAKAHASHI J; OHTA Y;

SAKAMOTO G

Number of Countries: 023 Number of Patents: 036

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
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DE 60011310	T2	20050616	DE 11310	A	20000323	200540
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Priority Applications (No Type Date): JP 99284529 A 19991005; JP 99227662 A 19990811; JP 99249065 A 19990902; JP 99254581 A 19990908; JP 99284528 A 19991005

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200112885	A1	J	42	D01F-006/04	
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Designated States (National): CN JP KR US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

EP 1126052	A1	E		D01F-006/04	Based on patent WO 200112885
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

KR 2001073205	A			D01F-006/04	
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EP 1126052 B1 E D01F-006/04 Related to application EP 20036185
Related to application EP 20036186
Related to application EP 20036187
Related to application EP 20036188
Related to patent EP 1335046
Related to patent EP 1335047
Related to patent EP 1335048
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Div ex patent US 6605348

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LU MC NL PT SE

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 ES 2220899 T3 D01F-006/04
 DE 60011310 T2 D01F-006/04
 DE 60011311 T2 D01F-006/04
 DE 60011308 T2 D01F-006/04

Abstract (Basic): **WO 200112885 A1**

NOVELTY - A high strength polyethylene fiber comprises a high molecular wt. polyethylene with a substantially ethylene repeating unit.

DETAILED DESCRIPTION - A high strength polyethylene fiber:

(a) comprises a high molecular wt. polyethylene with a repeating unit of substantially ethylene;

(b) has at least 5 limiting viscosity and 22 cN/dtex average strength; and either

(c) shows, in a temperature-rising DSC curve, at least one endothermic peak in the range 140-148degreesC (low temperature side) and at least one endothermic peak in the region of 148degreesC or higher (high temperature side); or

(d) has at least 100,000 frequency of friction until fiber break, in an abrasion test according to the B method for measuring abrasion resistance in the test method for general purpose spun yarn (JIS L 1095).

USE - For high strength polyethylene cut fibers (claimed) and staple fibers for non-woven cloth and spun yarn, ropes (claimed), nets (claimed), bullet proof and protective clothing (claimed), protective gloves (claimed), fiber-reinforced concrete products (claimed) and helmets (claimed).

ADVANTAGE - While having similar or higher strength and elastic modulus compared to conventional high strength polyethylene fibers, the fibers have excellent durability, and in particular abrasion resistance and extension and contraction fatigue resistance.

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Technology Focus:

TECHNOLOGY FOCUS - TEXTILES AND PAPER - Preferred Fiber: The height ratio of the low temperature side maximum endothermic peak to the high temperature side maximum endothermic peak is 1.4:1.0 - 3.0:1.0 (esp. 1.5:1.0 - 2.9:1.0).

Title Terms: HIGH; STRENGTH; POLYETHYLENE; CUT; FIBRE; ROPE; NET; BULLET; PROOF; PROTECT; CLOTHING; PROTECT; GLOVE; CONCRETE; HELMET; COMPRISE; HIGH; MOLECULAR; WEIGHT; POLYETHYLENE

Derwent Class: A17; A83; A92; F01; P21; P73

International Patent Class (Main): A41D-013/00; A41D-019/00; B32B-005/12; B32B-013/02; D01F-006/00; D01F-006/04; D02G-003/00; D04G-001/00; D07B-001/02

International Patent Class (Additional): A41D-031/00; B29B-011/16; B29B-011-16; C04B-016/06; D02G-003/36; D04B-021/00; D04C-001/06

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A04-G02E; A12-C02; A12-P07; A12-R01A; A12-S05K; F01-D05; F02-E03; F04-A; F04-C06

Polymer Indexing (PS):

<01>

001 018; R00326 G0044 G0033 G0022 D01 D02 D12 D10 D51 D53 D58 D82; H0000; S9999 S1070-R; S9999 S1003; S9999 S1092 S1070; S9999 S1183 S1161 S1070; S9999 S1445; P1218 P1161; P1150

002 018; ND01; ND04; B9999 B4091-R B3838 B3747; B9999 B4171 B4091 B3838 B3747; B9999 B4182 B4091 B3838 B3747; B9999 B5094 B4977 B4740; Q9999 Q7056-R; Q9999 Q7090 Q7056; Q9999 Q8548 Q8366; Q9999 Q7078 Q7056; K9905; B9999 B5572-R; B9999 B5367 B5276; B9999 B5287 B5276; B9999 B3918 B3838 B3747; Q9999 Q7001 Q6995; Q9999 Q6826-R; B9999 B3554-R; B9999 B3678 B3554; B9999 B4080 B3930 B3838 B3747; B9999

B5607 B5572; B9999 B5618 B5572; B9999 B5118 B5107 B4977 B4740

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